

**CLAIMS**

What is claimed is:

- 1 1. A method for accelerated scanning, comprising:
  - 2 (a) identifying a file access pattern associated with data;
  - 3 (b) reading the data based on the file access pattern; and
  - 4 (c) performing a virus scan on the data.
- 1 2. The method as recited in claim 1, wherein if it is determined that the data does  
2 not have the associated file access pattern, the data is read and a file access  
3 pattern associated with the file is generated and stored.
- 1 3. The method as recited in claim 1, wherein if it is determined that the data does  
2 not have the associated file access pattern, the data is read and the virus scan is  
3 performed, after which it is determined whether the virus scan was slower than a  
4 predetermined amount.
- 1 4. The method as recited in claim 3, wherein the file access pattern is conditionally  
2 generated based on whether the virus scan was slower than the predetermined  
3 amount.
- 1 5. The method as recited in claim 1, wherein the file access pattern includes a file  
2 location.
- 1 6. The method as recited in claim 1, wherein the file access pattern includes a data  
2 amount.

- 1 7. The method as recited in claim 1, wherein the data is read and scanned by  
2 executing a first thread of operation for reading the data and a second thread of  
3 operation for scanning the data.
- 1 8. The method as recited in claim 7, wherein the first thread of operation includes  
2 retrieving the file access pattern, reading the data based on the file access  
3 pattern, and caching the data.
- 1 9. The method as recited in claim 8, wherein the second thread of operation  
2 includes determining whether the file access pattern is valid, and reading the  
3 data from the cache if it is determined that the file access pattern is valid.
- 1 10. The method as recited in claim 8, wherein the second thread of operation  
2 includes determining whether the data is available for being read from the cache,  
3 and reading the data if the data is available for being read from the cache.
- 1 11. The method as recited in claim 1, and further comprising determining whether  
2 the file access pattern is invalid.
- 1 12. The method as recited in claim 11, and further comprising deleting the file  
2 access pattern if the file access pattern is determined to be invalid.
- 1 13. The method as recited in claim 12, and further comprising reading the data and  
2 generating a file access pattern associated with the file if the file access pattern is  
3 deleted.
- 1 14. A computer program product for accelerated scanning, comprising:  
2 (a) computer code for identifying a file access pattern associated with data;

- 3 (b) computer code for reading the data based on the file access pattern; and
- 4 (c) computer code for performing a virus scan on the data.

1 15. The computer program product as recited in claim 14, wherein if it is determined  
2 that the data does not have the associated file access pattern, the data is read and  
3 a file access pattern associated with the file is generated and stored.

1 16. The computer program product as recited in claim 14, wherein if it is determined  
2 that the data does not have the associated file access pattern, the data is read and  
3 the virus scan is performed, after which it is determined whether the virus scan  
4 was slower than a predetermined amount.

1 17. The computer program product as recited in claim 16, wherein the file access  
2 pattern is conditionally generated based on whether the virus scan was slower  
3 than the predetermined amount.

1 18. The computer program product as recited in claim 14, wherein the file access  
2 pattern includes a file location.

1 19. The computer program product as recited in claim 14, wherein the file access  
2 pattern includes a data amount.

1 20. The computer program product as recited in claim 14, wherein the data is read  
2 and scanned by executing a first thread of operation for reading the data and a  
3 second thread of operation for scanning the data.

- 1 21. The computer program product as recited in claim 20, wherein the first thread of  
2 operation includes retrieving the file access pattern, reading the data based on  
3 the file access pattern, and caching the data.
- 1 22. The computer program product as recited in claim 21, wherein the second thread  
2 of operation includes determining whether the file access pattern is valid, and  
3 reading the data from the cache if it is determined that the file access pattern is  
4 valid.
- 1 23. The computer program product as recited in claim 21, wherein the second thread  
2 of operation includes determining whether the data is available for being read  
3 from the cache, and reading the data if the data is available for being read from  
4 the cache.
- 1 24. The computer program product as recited in claim 14, and further comprising  
2 computer code for determining whether the file access pattern is invalid.
- 1 25. The computer program product as recited in claim 24, and further comprising  
2 computer code for deleting the file access pattern if the file access pattern is  
3 determined to be invalid.
- 1 26. The computer program product as recited in claim 25, and further comprising  
2 computer code for reading the data and generating a file access pattern  
3 associated with the file if the file access pattern is deleted.
- 1 27. A system for accelerated scanning, comprising:  
2 (a) logic for identifying a file access pattern associated with data;  
3 (b) logic for reading the data based on the file access pattern; and

4 (c) logic for performing a scan on the data.

1 28. A method for accelerated scanning, comprising:

2 (a) reading data during a first thread of operation, wherein the data is cached during  
3 the first thread of operation; and

4 (b) performing a virus scan on the data during a second thread of operation running  
5 in parallel with the first thread of operation, wherein the data is read from the  
6 cache during the second thread of operation.

1 29. A method for accelerated scanning, comprising:

2 (a) identifying data on a hard disk to be scanned for viruses;

3 (b) reading the data from the hard disk; and

4 (c) caching the scanned data for accelerating a virus scanning process involving the  
5 data.

1 30. A method for reducing delay associated with reading data from memory during a  
2 scan, comprising:

3 (a) initiating a scan;

4 (b) identifying a file to be scanned during the scan;

5 (c) determining whether the file has a file access pattern associated therewith;

6 (d) if it is determined that the file does not have the associated file access pattern,

7 (i) reading the data from the file,

8 (ii) scanning the data,

9 (iii) identifying a file access pattern associated with the file, and

10 (iv) storing the file access pattern;

11 (e) if it is determined that the file has the associated file access pattern, executing a  
12 first thread of operation and a second thread of operation, the first thread of  
13 operation including:

- 14 (i) retrieving the file access pattern,
- 15 (ii) identifying a file location and data amount of the file access pattern,
- 16 (iii) reading data from the file associated with the identified file location and
- 17 data amount,
- 18 (iv) caching the data, and
- 19 (iv) repeating (ii)-(iv); and
- 20 (f) said second thread of operation including:
  - 21 (i) determining whether the file location and data amount are valid,
  - 22 (ii) deleting at least a portion of the file access pattern associated with the
  - 23 file if it is determined that the file location and data amount are not valid,
  - 24 (iii) determining whether the data is available for being read from the cache,
  - 25 (iv) reading the data from the cache if it is determined that the file location
  - 26 and data amount are valid, and the data is available for being read from
  - 27 the cache, and
  - 28 (v) scanning the data.